



**UNIVERSITI PUTRA MALAYSIA**

**OCCUPATIONAL STRESS AMONG THE INFORMATION  
TECHNOLOGY (IT) PROFESSIONALS IN SELECTED COMPANIES  
IN THE KLANG VALLEY**

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**OCCUPATIONAL STRESS AMONG THE INFORMATION TECHNOLOGY  
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**By**

**NG SIEW FOEN**

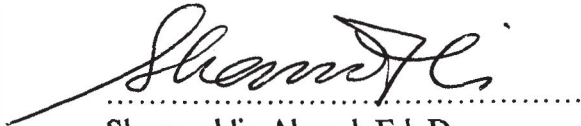
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The research project entitled Occupational Stress Among The Information Technology (IT) Professionals In Selected Companies In The Klang Valley by Ng Siew Foen is submitted in partial fulfillment of the requirements for the degree of Master of Science (HRD) in the Department of Professional Development and Continuing Education, Faculty of Educational Studies, University Putra Malaysia.

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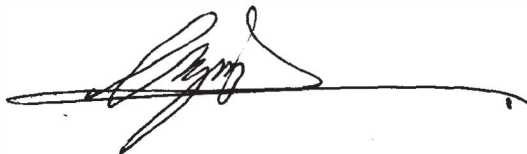
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## *DEDICATION*

*Dedicated to my dearest hubby for his unfailing  
support and encouragement towards  
the success of this study.*

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## **LIST OF ABBREVIATIONS**

<b>GAS</b>	<b>General Adaptation Syndrome</b>
<b>IT</b>	<b>Information Technology</b>
<b>JARING</b>	<b>Joint Advanced Research Integrated Networking</b>
<b>MIMOS</b>	<b>Malaysian Micro-Electronic System Institue</b>
<b>MSC</b>	<b>Multimedia Super Corridor</b>

Abstract of project paper submitted to Faculty of Educational Studies, Universiti Putra Malaysia in partial fulfilment of the requirements for the degree of Master of Science in Human Resource Development.

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**By**

**NG SIEW FOEN**

**MARCH 1999**

Supervisor : Dr. Shamsuddin Ahmad

Faculty : Faculty of Educational Studies

Stress in the workplace is becoming the most common complaint of the late 20<sup>th</sup> century employee. It is a costly, pervasive phenomenon in work organizations and many studies have been carried out in the west to investigate this area of human concern.

The objective of this study is to examine the occupational stress level of the IT professionals in selected companies and factors that cause occupational stress among them. It was hypothesized that there were significant differences between occupational stress level and the demographic variables of the IT professionals. The demographic variables involved were 1) age, 2) sex, 3) education background, 4) work department, and 5) annual gross salary.

The population in this study consists of the IT professionals from 5 companies in the Klang Valley. Questionnaires using six-point Likert-type scales were used to measure the variables. The data collected were analysed using the SPSS. Descriptive statistics

were used to describe the demographic profile of samples. Independent t-tests were employed to compare the significant differences in the level of occupational stress for gender. The ANOVA was used for hypotheses testing the significance differences in the level of occupational stress for other demographic variables.

The results revealed that the occupational stress level of the IT professionals was generally moderate with some experiencing high level of stress. The top ten stressors reported by the sample of IT professionals were: 1) increasing demands for more and better information systems; 2) keeping up with new technology; 3) maintaining good relationship with customers; 4) being expected to be a source of help; 5) no control over work environment; 6) overload with deadlines pressures; 7) work interrupted too often; 8) difficulties in obtaining information, and resources; 9) dealing with difficult people at work; 10) time pressure and meeting deadlines. The results also indicated that there was no significant differences in stress according to all the demographic characteristics.

From the findings, it is recommended that individual IT professionals should assess their occupational stress levels and identify which factors may seem stressful to them in order for them to plan a stress intervention program to cope with their stress. Organizations should develop strategies to help their staff cope with stress through development activities. More researches can also be conducted on this area of occupational stress. For instance, this study can be extended to 1) using a larger sample, 2) using qualitative study; 3) work attitudes and work stress, and 4) work stress and its effect on home life.

Abstrak kertas projek yang dikemukakan kepada Fakulti Pengajian Pendidikan, Universiti Putra Malaysia sebagai memenuhi sebahagian daripada keperluan bagi Ijazah Sarjana Sains (Pembangunan Sumber Manusia).

**TEKANAN KERJAYA ANTARA PROFESIONAL (TEKNOLOGI MAKLUMAT) IT SYARIKAT YANG TERPILIH DI LEMBAH KLANG**

**Oleh**

**NG SIEW FOEN**

**MAC 1999**

Penyelia : Dr. Shamsuddin Ahmad

Jabatan : Pemajuan Profesional dan Pendidikan Lanjutan

Tekanan kerjaya merupakan salah satu daripada masalah pekerja yang ketara di akhir abad yang ke 20 ini. Ia adalah fenomena yang amat merugikan organisasi pekerjaan.

Objektif kajian ini bertujuan untuk menguji tahap tekanan kerjaya di kalangan profesional IT di syarikat-syarikat yang terpilih di Lembah Klang dan juga menentukan faktor-faktor yang menyebabkan tekanan tersebut. Hipotesis kajian ini menyatakan bahawa tekanan kerjaya ada hubungan dengan variable demografik profesional-profesional IT. Ciri-ciri demografik yang terlibat adalah 1) umur, 2) jantina, 3) tahap pelajaran yang dicapai, 4) jabatan pekerjaan, dan 5) pendapatan kasar tahunan.

Dalam kajian ini, populasi yang digunakan terdiri daripada profesional IT dari 5 syarikat di Lembah Kelang. Soal selidik yang menggunakan skala Likert enam poin digunakan untuk mengukur variable. Data yang dikutip dianalisa dengan menggunakan SPSS. Statistik deskriptik digunakan untuk menghuraikan sample profil demografik. Dalam 'Independent t-test' pula digunakan untuk membanding perbezaan tahap tekanan

di antara jantina. Ujian ANOVA digunakan untuk menguji hipotesis di antara perbezaan tahap tekanan pekerjaan bagi variable demografik yang lain.

Keputusan yang diperolehi menunjukkan bahawa tekanan kerjaya di kalangan profesional IT adalah pada umumnya sederhana dan terdapat juga yang mengalami tekanan kerjaya yang tinggi. Sepuluh faktor yang menyebabkan tekanan kerjaya di kalangan profesional IT telah dikenalpastikan : 1) peningkatan permintaan terdapat sistem informasi yang canggih; 2) mengikuti pengedaran teknologi baru; 3) mengekal hubungan yang baik dengan pelanggan; 4) menjadi sumber pertolongan kepada lain; 5) tiada kawalan terhadap alam pekerjaan; 6) beban kerja; 7) pekerjaan sentiasa mempunyai gangguan luar; 8) kesukaran mendapat matlumat dan sumber; 9) berhadapan dengan mereka yang rumit; 10) tekanan masa. Keputusan kajian juga memaparkan bahawa tiada hubungan yang diperolehi di antara tekanan kerja dan semua ciri-ciri demografik.

Dari dapatan kajian, cadangan-cadangan berikut telah diberikan. Para profesional IT harus mengukur tahap tekanan kerja dan memastikan faktor manakah yang memberi tekanan kepada mereka supaya mereka dapat merancang program untuk menghadapi tekanan ini. Organisasi-organisasi juga harus merancang strategi-strategi untuk menolong pekerja mereka menghadapi tekanan ini melalui aktiviti-aktiviti yang membangun. Lebih banyak kajian harus dijalankan di dalam aspek tekanan kerja. Contohnya, kajian ini boleh diluaskan kepada 1) menggunakan sampel yang lebih besar, 2) menggunakan kajian kualitatif, 3) mengkaji sikap kerja dan tekanan kerja, dan 4) tekanan kerja dan pengaruhnya terhadap keluarga.

# **CHAPTER I**

## **INTRODUCTION**

### **Background**

Every business organization constitutes a human ecology which strongly affects the overall psychological environment of its employees who have different attitudes, values and behaviour (Albrecht, 1979). The human resource is the most valuable asset in any organization and is the only long-term sustainable competitive advantage (Crouter & Garbarino, 1982; Finn, 1994.) In an increasingly competitive world, organizational success and even survival depends on maximizing the effectiveness of the human resources that form the core of every business enterprise. Organizations cannot compete successfully when they are faced with problems of high turnover, absenteeism, poor morale, declining employee performance, sabotage, communication breakdowns, increasing health care costs, and litigation expenses arising from employee claims of job-related stress (Matterson & Ivancevich, 1987).

The United States Clearing House for Mental Health Information reported that U.S industry has an annual \$17 billion decrease in production capacity due primarily to stress-related problems. Others estimate that at least \$60 billion is lost annually by organizations solely because of stress-related physical illness (Matterson & Ivancevich,





1982). Occupational stress could be a source of productivity problems for companies and thus, reflect the need for employees to pay more attention to their employees' needs.

Considering the importance of human resources, there is an inevitable need for organization members to develop and maintain an environment in which workers will want to be productive and competent, contributing member of the organization (Crouter & Garbarino, 1982; Crouter & Manke, 1994; Gordon, 1991; Mondy & Noe, 1993; Orthner & Pittman, 1986). In order to develop a conducive environment, there is a need to understand occupational stress and how it affects the workers. Job-related stress is therefore an important research area because of its serious organizational and human consequences.

## **Stress**

Stress is perhaps the most common problem of everyday life to the extent that it has come to characterize modern life. Many studies have been carried out pertaining to the causes and effects of stress. Hence, many definitions have been given to give a clearer picture of what is actually stress. According to early stress researcher Hans Selye, stress is simply refers the response of an individual towards the changes or demands made upon him whether they are mental, physical, chemical or emotional. It is a chemical reaction that allows an individual to adjust, resist, or adapt to stressors in order to maintain a natural balance, or "homeostasis". Stress is accumulated through the demands of everyday life and if the body is not be able to maintain a balance, the

individual will not be able to function to his or her maximum potential. Ross & Altmaier (1994) shared the same view, stating that stress is an ongoing process that can be worsened by our inability to control either the problem that is causing the stress or our reactions to the problem.

Powell, (1994), Matteson & Ivancevich, (1989) and Ross & Altmaier (1994) agree that anything that causes stress is a “stressor”. They are from the environment, physical strains, and emotions. Environmental stressors include cold and hot temperatures, noise, air pollution, overcrowding and poor working conditions. Illness, over exertion, lack of sleep are all physical stressors. Most of all, the primary source of stress does not lie in the external realm, but internally which is within our emotions, thoughts and perception.

### **Stress at Workplace**

Even though stress has been a human concern for centuries, it is only in the recent years that increased attention has been given to the effects of stress in the workplaces. Hanson (1991) defines workplace stress as “a lack of harmony between a worker and his or her environment-can be a healthy stimulus to creative acts, or it can become a burden with harmful effects.” The emphasis on work environment and a move from bureaucratic hierarchies to learning organizations, has moved the focus of attention from the organization onto the individual. For this reason, occupational stress is now seen as an individual affliction that effects on the organization as a whole. Much of the research performed on occupational stress has indicated that the reasons for its existence are

dependent upon the organization itself and not the individual. Work pressure, lack of managerial support, tight regiments, and a low span of control all lead to increased stress on the individual employee. This is even more critical where the IT industry is concerned. In a recent survey, a majority of IT professionals (74%) in the United States and the United Kingdom said the stress of their jobs was increasing and having a negative impact on their personal lives. With the IT industry growing stronger and the demand for the IT professionals increasing, there is a need to understand workplace stress in this industry. Overload of occupational stress will lower efficiency and productivity in the workplace as well as increase health care costs to the organization. Thus, the need to understand stress is essential as stress is unavoidable in any working conditions. In fact a completely stress-free life would be a great big yawn! We all need challenges to help us to focus, perform and feel alive. Therefore, we can't get rid of stress from our life completely but we must learn to manage it so that it will enhance and stimulate our performance instead of destroying it.

### **Statement of Problem**

Occupational stress is a compelling and powerful notion. This power is embedded in the belief that occupational stress is a causal factor in the development and maintenance of ill-health. The notion of the stress concept has been repeatedly criticised (Pollock, 1988; Newton, 1989) and the evidence to support the relationship between stress and ill-health is conflicting and inconclusive (O'Leary, 1990; Cohen & Williamson,

1991; Weisse, 1992). In fact, the mere suspicion that stress may cause ill-health has apparently been sufficient to raise concerns about individual well-being and its social, financial and commercial implications.

There is no question that stress on IT people has increased in the last few years. The increased stress is due to the fact that IT people are more integral part of the overall business and like other business people, feel the pressures of quick product cycles, major changes in organization structure, and decreased downtime". (Rubin Robert, 1998)

In Malaysia, Vision 2020 is an optimistic, yet realistic, aspiration which draw upon past achievements and embodies the collective hopes of the Malaysian people. As a strategy to achieve the vision, Malaysia has embarked on ambitious plans to leapfrog into the Information Age by providing intellectual and strategic leadership. To accelerate Malaysia's entry into the Information Age, Multimedia Super Corridor, a world class act to help companies of the world to test the limits of technology is created.

In line with this, two of the world's first Smart Cities are being developed in the Corridor: Putrajaya, the new seat of government and administrative capital of Malaysia where the concept of electronic government is introduced; and Cyberjaya, an intelligent city with multimedia industries, R&D centres, a Multimedia University and operational headquarters for multinationals wishing to direct their worldwide manufacturing and trading activities using multimedia technology.

To actualize our nation's vision, IT professionals play an important role in providing information, ideas and services. In fact, the demand for IT skills and education have increased over the last two years in Malaysia. IT professionals have to constantly re-educating and updating their skills because their academic education becomes quickly obsolete.

The IT profession is indeed a stressful profession. IT professionals have to cope with long working hours, unending user demands, unmet deadlines and skill obsolescence. If IT professionals face tremendous job stress which cannot be contained, burnout will happen in them and this will lead to a variety of health problems (Liang,1997). According to a recent study done in Singapore on occupational stress among IT professional, IT professionals are found to be highly stressed. There is clearly a need for organizations and IT professionals to pay attention to and manage the occupational stress of IT professionals. Organizations that fail to do so are likely to have dissatisfied employees and high staff turnover. IT professionals who fail to effectively manage their stress may end up with a variety of health problems.

Specifically, in this study the researcher addressed several questions :

1. What is the level of occupational stress among the IT professionals under study?
2. What are the sources of occupational stress among the IT professionals under study?

3. What are the relationships between demographic characteristics (such as age, sex, education background, occupational status and salary ) and the level of occupational stress among the IT professionals?

### **Objectives of the Study**

#### **General Objective**

The main purpose of this study is to examine the level of occupational stress among the IT professionals and the causes of occupational stress in selected companies in the Klang Valley.

#### **Specific Objectives**

The specific objectives of the study are as follow :

1. To measure the level of occupational stress among the IT professionals
2. To identify the sources of occupational stress among the IT professionals.
3. To examine the relationships between selected individual attributes and level of occupational stress among the IT professionals.

### **Research Hypotheses**

The hypotheses of this study are based on objective 3 . They are as follow;

1. There is a significant difference between the age groups and the level of occupational stress among the IT professionals.
2. There is a significant difference between the gender and the level of occupational stress among the IT professionals.
3. There is a significant difference between the occupational status and the level of occupational stress among the IT professionals.
4. There is a significant difference between the level of education and the level of occupational stress among the IT professionals.
5. There is a significant different between the annual gross salary and the level of occupational stress among the IT professionals.

### **Significance of the Study**

This research is carried out to promote a better understanding of occupational stress faced by IT professionals in Malaysia. It is hoped that the findings will assist employers and policymakers to develop some kind of interventions which may help to reduce occupational stress and promote the well-being and effectiveness of employees.

On a wider perspective, most of the research on occupational stress among IT professionals have been carried out in the U.S and other nations. There has not been much research of this kind done in Malaysia. Hence, there is a need for this study to be done as IT professionals are fast becoming a big workforce in the fast expanding economy of Malaysia. This research hopes to gauge the effects of occupational stress and how it influences the lives of IT professionals in Malaysia.

### **Limitations of the Study**

There are many variables which are related to occupational stress. Every individual responds differently to the stress they face depending on their personality characteristics, their unique experience in the workplace and their coping strategies. Stress is an interactive process which involve these factors. In this research, the researcher merely focuses on work related stress and its relationship with selected individual characteristics. Other factors such as family stress will not be discussed.



The instruments used to measure the level of occupational stress may not measure validly as the measurement used to rate the stress level is based on subjective perceptions of the IT professionals rather than by more objective scientific and medical techniques. This is the second limitation faced by the researcher. What is stress to an individual may not be a stress to the others as every individual reactions can be very different. Hence, the designed scale used to measure the level of stress may produce ambiguous results. Thus, the researcher has done a pre-testing on the instruments used to verify the validity and reliability before they were performed on the actual population.

Another limitation which would affect the results is stress levels may not necessarily remain constant. The IT professionals may feel less stressful when things are going well, but the scores may differ when things are going badly. This problem can be minimised as the research is concerned on the stress level of a group of people and not just an individual.

### **Assumptions**

The basic assumption adopted in this study is that every IT professional experiences a certain degree of work stress. It is assumed that the level of stress is measurable based on the physiological, physical and psychological effects on the person concerned.